1.

from pprint import pprint

maze = [

[1, 1, 1, 1, 1, 1],

[1, 0, 1, 0, 1, 1],

[1, 0, 1, 0, 0, 1],

[1, 0, 0, 0, 1, 1],

[1, 0, 1, 0, 0, 1],

[1, 1, 1, 1, 1, 1]

]

directions = [

lambda x, y: (x-1, y),

lambda x, y: (x+1, y),

lambda x, y: (x, y-1),

lambda x, y: (x, y+1),

]

def maze\_solve(x, y, goal\_x, goal\_y):

maze[x][y] = 2

stack = []

stack.append((x, y))

print('迷宮開始')

while (len(stack) > 0):

cur = stack[-1]

if cur[0] == goal\_x and cur[1] == goal\_y:

print('目前位置 :', cur)

print('抵達出口')

return True

for dir in directions:

next = dir(cur[0], cur[1])

if maze[next[0]][next[1]] == 0:

print('目前位置 :', cur)

stack.append(next)

maze[next[0]][next[1]] = 2

break

else:

maze[cur[0]][cur[1]] = 3

print('目前位置 :', cur)

stack.pop()

else:

print('沒有路徑')

return False

maze\_solve(1, 1, 4, 4)

pprint(maze)

2.

from pprint import pprint

maze = [

[1, 1, 1, 1, 1, 1, 1, 1, 1, 1],

[1, 0, 1, 1, 0, 0, 0, 1, 0, 1],

[1, 0, 1, 1, 0, 1, 0, 1, 0, 1],

[1, 0, 1, 0, 0, 1, 1, 0, 0, 1],

[1, 0, 1, 0, 1, 0, 1, 1, 0, 1],

[1, 0, 0, 0, 1, 0, 0, 0, 0, 1],

[1, 0, 1, 0, 0, 0, 1, 1, 0, 1],

[1, 0, 1, 1, 1, 0, 1, 1, 0, 1],

[1, 1, 0, 0, 0, 0, 0, 0, 0, 1],

[1, 1, 1, 1, 1, 1, 1, 1, 1, 1]

]

directions = [

lambda x, y: (x-1, y),

lambda x, y: (x+1, y),

lambda x, y: (x, y-1),

lambda x, y: (x, y+1),

]

print('迷宮圖形如下 :')

pprint(maze)

x, y = map(int,input('請輸入迷宮入口 x, y : ').split(', '))

goal\_x, goal\_y = map(int,input('請輸入迷宮出口 x, y : ').split(', '))

def maze\_solve(x, y, goal\_x, goal\_y):

maze[x][y] = 2

stack = []

stack.append((x, y))

print('迷宮開始')

while (len(stack) > 0):

cur = stack[-1]

if cur[0] == goal\_x and cur[1] == goal\_y:

print('抵達出口')

return True

for dir in directions:

next = dir(cur[0], cur[1])

if maze[next[0]][next[1]] == 0:

stack.append(next)

maze[next[0]][next[1]] = 2

break

else:

maze[cur[0]][cur[1]] = 3

stack.pop()

else:

print('沒有路徑')

return False

maze\_solve(x, y, goal\_x, goal\_y)

pprint(maze)